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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/695,391 | 10/29/2003 | Atsushi Watanabe | 2003_1557A | 6828 |

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| EXAMINER | |
|---|---|
| LEWIS, BEN | |
| ART UNIT | PAPER NUMBER |
| 1745 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|---|---|---|
| 3 MONTHS | 02/09/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/695,391 | WATANABE ET AL. | |
| | Examiner | Art Unit | |
| | Ben Lewis | 1745 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) *13-28 and 30* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12 and 29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/27/06, 12/01/05, 2/13/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Election/Restrictions*

Applicant's election of the Invention I drawn to battery pack (readable on claims 1-12 and 29) in the reply tiled on 12/27/2006 is acknowledged.

Claims 13-28 and 30 are withdrawn from further consideration pursuant to 37 CFR 1. 142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made without traverse in the reply filed on 12/27/2006.

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 6-8 and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamazaki et al. (U.S. Patent No. 6,632,538 B1).

With respect to claims 1, 6-8 and 29, Yamazaki et al. disclose a sheet for cell and cell device (title) wherein the present invention provides a battery case forming

laminated sheet for forming a battery case comprising a first base film, and a heat-adhesive resin layer formed on the inner side of the first base film (Col 1 lines 39-50). The component layers may be laminated by a known dry lamination method using a two-component polyurethane adhesive or an extrusion lamination method (also called a sandwich lamination method (Col 5 lines 30-45). The polyurethane adhesive has isocyanate ("TAKERAKKU A511" commercially available from Takeda Chemical Industries, Ltd.) as a main component, and a polyol ("POLYOL A50" commercially available from Takeda chemical Industries, Ltd.) (Col 7 lines 20-27).

With respect to claim 1, this claim 1 is a product by process claim. The manufacturing steps "spreading, emulsifying, dispersing and production" of claim 1, do not further limit the product of claim 1. MPEP 2113 states, "Even though product-by-process claims are limited by and defined by the process, determination of patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F. 2d 698,227 USPQ 964,966 (Fed Cir. 1985).

Furthermore, the intermediate and its components "compound A", "compound B1" and "compound B2" are not given patentable weight because they are not the product.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al. (U.S. Patent No. 6,32,538 B1) in view of Aaltonen et al. (U.S. Pub. No. 2003/0108786 A1).

With respect to claim 2, Yamazaki et al. disclose a sheet for cell and cell device (title) in paragraph 2 above. Yamazaki et al. does not specifically teach a holder having an output terminal attached thereto at a predetermined position that is fixed to the end of the cell. However, Aaltonen et al. disclose a battery system (title) wherein the assembly of the insulation plates **14** and **44**, cap **50** "holder" and safety component **26** is held together by together a rivet **60**. The lead end of the safety component and rivet could also be welded together, but the hole in the lead of safety component is still needed to pass the rivet body. A rivet insulator **62** includes a hollow shaft-like protrusion **63** which passes through the opening **51** in the face **52** of the recessed portion **55** to insulate the body portion **67** of the rivet **60** from the cap **50**. The rivet insulator **62** is made of a plastic material such as a polyethylene or other electrically insulative material well known to those skilled in the art. The body **67** of the rivet **60** passes in an outwardly direction through the opening **134** in the lead **28** of the safety component **26**, through the opening **43** in the insulation plate **44**, through the cap **50**

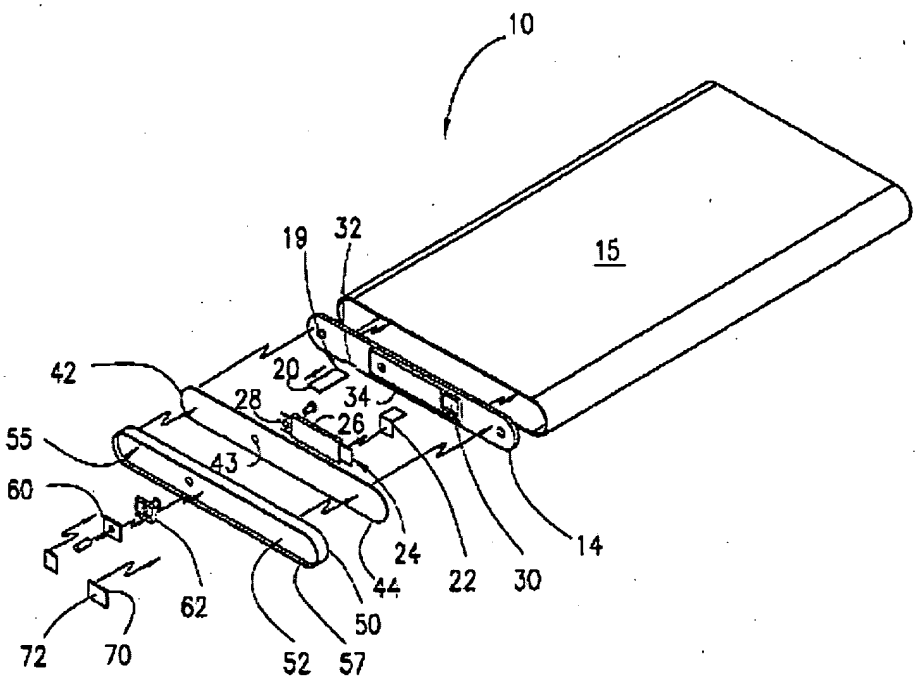
and rivet insulator **62** and through the rivet backer **65**. The rivet body end is expanded in the normal manner to fasten the assembly together. The rivet backer **65** functions as a connection base for a negative voltage polarity pad **70** which has a surface **72** for contact with the corresponding negative voltage potential terminal (Paragraph 0036).

With respect to the plastic protective layer extending the periphery of the cell, Aaltonen et al also teach that optionally, the can structure **12** may be isolated and electrically insulated from external circuitry or contact to prevent accidental electrical short circuits since the can structure is at a positive voltage potential when, for example, an aluminum lithium-ion battery cell is used as the battery cell for the battery pack. The can structure **12** preferably is covered with a thin plastic foil, for example, a polyethylene or PET or some other plastic material foil such as illustrated generally by the reference numeral **90** and which foil is slid over the exterior of the can structure **12** such as illustrated in FIGS. 1 and 6 to provide the desired electrical insulation. Additionally, the can structure **12** may be painted, anodized, lacquered or otherwise coated with an insulating cover to provide the desired electrical insulation (Paragraph 0041).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the holder of Aaltonen et al. into the battery Yamazaki et al. because a cap would seal and protect the cell's internal components.

With respect to claims 3-5, Aaltonen et al. teach that the assembly of the insulation plates **14** and **44**, cap **50** and safety component **26** "protective element" is held together by together a rivet **60**. The lead end of the safety component and rivet

could also be welded together, but the hole in the lead of safety component is still needed to pass the rivet body (Paragraph 0036) (See Fig. 1).




5. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al. (U.S. Patent No. 6,32,538 B1) in view of Kellner et al. (U.S. Patent No. 4,388,865).

With respect to claims 9-11, Yamazaki et al. disclose a sheet for cell and cell device (title) in paragraph 2 above. Yamazaki et al. does not specifically teach wherein the polyurethane emulsion has a pigment incorporated therein. However, Kellner disclose a printing layer of urethane and acethyl polymers (title) wherein, a printing member(A) has a print surface formed of a blend of urethane and acetal polymers. The

composition also contains 0.5-10% carbon black "pigment". The printing member is used for intaglio printing, particularly gravure printing. The print surface, when engraved by laser beam, volatilizes completely and leaves no rims of deposited material around the edges of the image area (See abstract). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the carbon black "pigment" of Kellner into the polyurethane of emulsion of Yamazaki et al. because Kellner teach that carbon black that will have the effect of making the composition absorb the intended radiation (Col 4 lines 34-60).

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al. (U.S. Patent No. 6,32,538 B1) in view of Kuroda et al. (U.S. Patent No. 6,255,433 B1).

With respect to claim 12, Yamazaki et al. disclose a sheet for cell and cell device (title) in paragraph 2 above. Yamazaki et al. does not specifically teach wherein the polyurethane has a thixotropic material incorporated therein. However, Kuroda et al. disclose a one-package thixotropic polyurethane resin composition (title), wherein the one-package thixotropic polyurethane resin composition comprises 10 to 90% by weight of a urethane prepolymer and 0.1 to 20% by weight of hydrophobic fine powder silica and 0.01 to 3.0% by weight of an oxazolidine-ring opening accelerator (Col 1 lines 63-67). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the fine powder silica "thixotropic material" of Kuroda et al. into polyurethane emulsion of Yamazaki et al. because Kuroda et al. teach

that resin composition excellent in storage stability and curability and having low modulus and controlled foaming (Col 1 lines 5-10).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ben Lewis whose telephone number is 571-272-6481. The examiner can normally be reached on 8:30am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ben Lewis

Patent Examiner
Art Unit 1745

PATRICK JOSEPH RYAN
SUPERVISORY PATENT EXAMINER